



113951

## Superfund Proposed Response Action

U.S. Environmental Protection Agency  
Region 2



## Universal Oil Products Superfund Site East Rutherford, Bergen County, New Jersey

February 2012



### ◀ MARK YOUR CALENDAR ▶

#### February 29 – March 30, 2012:

Public comment on the Engineering Evaluation/Cost Analysis for the Universal Oil Products Site and the proposed cleanup.

#### March 6, 2012 at 6:30 PM:

Public Meeting  
East Rutherford Memorial Library  
143 Boiling Springs Avenue  
East Rutherford, NJ 07073



The **Administrative Record** file contains the documents upon which EPA based its selection of the preferred response action and is available at the following locations:

East Rutherford Memorial Library  
143 Boiling Springs Avenue  
East Rutherford, New Jersey 07073  
(201) 939-3930  
Hours: Mon-Thurs: 10:00 AM - 8:00 PM  
Fri: Noon - 5:00 PM  
Sat: 1:00 - 4:00 PM (Sept – June)

EPA Region 2 - Superfund Records Center  
290 Broadway, 18th Floor  
New York, NY 10007-1866  
(212) 637-4308  
Hours: Mon-Fri: 9:00 AM - 5:00 PM

EPA Website:  
<http://www.epa.gov/region2/superfund/npl/universaloil/>

### THE PURPOSE OF THIS DOCUMENT

The U.S. Environmental Protection Agency (EPA) is proposing a Non-Time-Critical Removal Action (NTCRA) to address an area of highly contaminated material at the Universal Oil Products (UOP) Superfund site. An Engineering Evaluation/Cost Analysis (EE/CA), which describes three alternatives along with their respective costs to address the contamination, has been prepared by a potentially responsible party for the site, Honeywell International, Inc., and submitted to EPA. EPA has considered the alternatives evaluated in the EE/CA, and has identified its preferred response action. This fact sheet summarizes the EE/CA, and solicits public comment regarding the preferred response action.

The response action proposed for the UOP site is the excavation of approximately 27,000 cubic yards of contaminated sediment, soil and debris from the area in and around the former wastewater lagoon and adjacent channels. Under the proposed action, a tide-gate would be installed

at Murray Hill Parkway and the lagoon and channels would be dewatered to allow for excavations "in the dry," down to the natural clay layer that is present throughout most of the site. The excavated material would undergo additional dewatering and then be disposed at appropriate off-site facilities. Fill material would be added to provide habitat for biota that move into the area as well as provide cover over any residual contamination.



EPA has issued this document as part of its public participation responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan. The EE/CA contains additional information than what is provided herein. It is available at the repositories listed on the first page and at the project website <http://www.epa.gov/region2/superfund/npl/universaloil/>. EPA encourages the public to review the EE/CA for additional details about the site and EPA's preferred response action and submit their comments to EPA. Public comment is requested on all of the alternatives evaluated in the EE/CA, as changes to the preferred response action or a change from the preferred alternative to another alternative may be made if public comments or additional data indicate that such a change will result in a more appropriate response action. The final decision regarding the response action will be made after EPA has taken into consideration all public comments. The final decision will be documented in an Action Memorandum.

## **SITE BACKGROUND**

The UOP site is located in the Borough of East Rutherford, Bergen County, New Jersey. As depicted in Figure 1, the last page of this document, the property is surrounded by tidal marshes, highways, and commercial and light-industrial properties. Berry's Creek and tidal marshes are east of the UOP site, and Ackerman's Creek and commercial properties are to the south. The UOP site encompasses approximately 74 acres, which are divided into Operable Unit 1 (OU1 - the Uplands) and OU2 (the Streamlands). The Uplands are the result of fill material placed upon the native peat which lies over a thick glacial clay. The site is further divided into six areas based on historic use. OU1 includes Areas 1, 1A, 2 and 5, and OU2 consists of Areas 3 and 4. In addition, the site is physically split roughly into thirds by the New Jersey Transit Pascack Valley commuter rail line and by Murray Hill Parkway.

The UOP site was initially developed in 1932 by Trubeck Laboratories, which built and operated an aroma chemicals laboratory and later a solvent recovery operation. UOP, a division of the Signal Companies, acquired the property and facilities in 1960. All operations at the facility were terminated in 1979, and the buildings were demolished in 1980. In 1986, Allied Corporation merged with the Signal Companies, forming AlliedSignal. As part of

the merger, AlliedSignal acquired the UOP property. In 1999, Honeywell merged with AlliedSignal. The property (with the exception of the 17 acres west of the Pascack Valley rail line) was sold to the New Jersey Sports and Exhibition Authority (NJSEA) in December 2006. The portion of the site west of the NJ Transit Pascack Valley Line has been cleaned and redeveloped including several commercial businesses.

Various investigations conducted between 1983 and 2010 indicate that the UOP site has been contaminated by historical operations on the UOP property as well as from releases that occurred on nearby facilities. Soil, groundwater, sediment, and surface water have been contaminated by volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. Multiple remedial actions have been completed within the OU1 area to address portions of the contaminated media.

The primary medium affected in the streamlands (OU2) is sediment, and there are multiple chemicals of concern in these areas. PCBs, chromium, and mercury have generally been identified as the most prevalent chemicals of concern present in sediment at elevated concentrations. Honeywell is currently conducting a Remedial Investigation/Feasibility Study (RI/FS) for OU2, which began in 2005. Sampling during the RI/FS found that the levels of contamination in the vicinity of the former wastewater lagoons are substantially higher than the rest of the site and have the potential to migrate. In response to this threat, EPA and Honeywell agreed to address the contamination in the vicinity of the lagoons through this NTCRA.

A wastewater treatment plant and two wastewater lagoons ceased operation in 1971. The contents of the wastewater lagoons, including the dividing wall between them, were removed under an interim remedial measure (IRM) and transported off site for disposal in 1990. In addition, in 2007, an IRM was conducted within the footprint of the Meadowlands rail line as that area would no longer be accessible for remediation after completion of rail line construction. Sediment contamination was addressed by removing soil and sediment from within the proposed railroad footprint. In the wetland areas, four feet of sediment were removed and, within portions of the lagoon and tidal ditches, sediment was excavated to a depth of two feet below the proposed final grade.



Berry's Creek, located on the eastern border of the site, has received contamination from the UOP site as well as from other hazardous waste sites in the vicinity. Movement of contamination both to and from Berry's Creek can occur through tidal action. Creek sediments are contaminated with mercury, PCBs and other chemicals. Fish and crabs in Berry's Creek and adjacent water bodies have been found to be contaminated with chemicals at levels that exceed U.S. Food and Drug Administration guidelines for human consumption. NJDEP consumption advisories are in place for several species of fish and for crabs. An RI/FS for the Berry's Creek Study Area is ongoing.

### **NTCRA AREA DELINEATION**

The NTCRA focuses on addressing soft sediment contamination within the lagoon and stream channels located in the northwest portion of the UOP site, based on the relatively higher concentration of contaminants of concern (COCs) in these areas. In the NTCRA area, concentrations were found to be as high as 5,810 parts per million (ppm) of PCBs, 643 ppm of mercury and 49,800 ppm of chromium; and the overall levels of contamination exceeded screening levels by several orders of magnitude. While the primary sources of COCs (former UOP operations and off-site sources) have been eliminated, the soft sediments are a potential secondary source of COCs to other areas of the site.

Preliminary human health and ecological risk assessment calculations prepared as part of the OU2 RI/FS were evaluated in consideration of the NTCRA. Exposure Point Concentrations, which are the concentrations of contaminants to which people or organisms are exposed, were calculated from samples in the channels in the western portion of the site, as well as for the berms. Risk calculations for dermal contact resulted in an excess lifetime cancer risk that exceeds EPA's acceptable risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ , and hazard index threshold of 1.0. Ecological hazard quotients were also considerably greater than the acceptable screening levels.

The remediation of contaminated sediment in the northwest portion of the site will address this secondary source area, reduce overall contaminant mass, and reduce potential further impacts to the downgradient stream channels located in the eastern portion of the site. The NTCRA will also remove the lagoon berms to restore hydraulic

connectivity between the lagoon and stream channels.

### **REMOVAL ACTION OBJECTIVES**

The remedial action objectives (RAOs) for the NTCRA at the UOP site are as follows:

- ☐ Remove source areas in the northwest portion of OU2 to prevent or minimize migration of contaminated sediment from the lagoons and adjacent stream channels to downstream portions of OU2.
- ☐ Reduce potential risk to human and ecological receptors due to contaminated sediment and soil in the lagoon, lagoon berms, and adjacent stream channels.

Cleanup numbers were not developed for this NTCRA. The areal extent of this response action was defined to address high levels of contamination in the lagoon berms and the soft sediments in the lagoon and the adjacent channels, which have the potential to migrate to other areas. Some additional areas are included in the NTCRA area, primarily because they lie between other areas being removed, and it will be easier to address these now, rather than later. Channels beyond the footprint planned for remediation were not included because the soft sediment has been eroded away, leaving an armoring layer of gravel or the native clay, and COC concentrations similar to the COC concentrations for the rest of the site. Wetland areas have less potential for migration of contaminants.

In areas where excavation will occur, the sediment will be removed to the underlying clay layer. The clay has been shown to be clean in most samples and has been demonstrated to be a boundary to downward migration of contamination. It is likely that the few occurrences of contamination in the clay were the result of mixing with overlying contamination during sampling. Post excavation sampling will be conducted to document any residual concentrations following the cleanup. One foot of fill will be added to provide a suitable substrate for biota and will help ensure that biota will not come into contact with any residual contamination that remains in the remediation footprint.

Cleanup numbers for the site will be determined through the RI/FS process for OU2, which will address the remaining contamination at the site.



## **SUMMARY OF PROPOSED RESPONSE ACTIONS**

### **Alternative 1: No Further Action**

A no further action response would assume no remedial action beyond what has been implemented in the past. The No Action alternative is evaluated to provide a basis of comparison to the active alternatives. There are no costs or time to implement associated with the no further action alternative. Taking no action as part of this NTCRA would not preclude the selection of an action for OU2 that addresses this portion of the site.

### **Alternative 2: Berm Removal and Sediment Containment (Capping)**

Contaminated sediments (the lagoon, the southern ditch, the northern and eastern channels, and the eastern channel meander) would be contained, and berm material would be removed, dried, and disposed off site. Off-site transport is assumed to be by truck. Containment would be completed through placement of a cap consisting of a subaqueous reactive barrier (SRB) mat followed by a coarse material protective armor layer. Berms will not be replaced, creating open water where the berms are now located.

Total Capital Cost	\$10,171,261
Present Worth O&M Cost for 30 years	\$2,524,507
Total Present Worth	\$14,074,737
Total Annual O&M	\$203,425
Construction Time	Four to five months

### **Alternative 3: Sediment Excavation, Backfilling and Berm Removal**

This alternative would remove contaminated sediments from the lagoon, the southern ditch, the northern and eastern channels, and the eastern channel meander, in addition to contaminated soils from the lagoon berms. The sediment and soil would be dried and then transported to a hazardous- or nonhazardous-waste disposal facility based upon the concentration of contaminants within the material. Off-site transport is assumed to be by truck. The excavated areas would then be backfilled with one foot of clean fill. Berms will not be replaced, creating open water where the berms are now located.

Total Capital Cost	\$13,915,373
Present Worth O&M Cost for 30 years	\$288,048
Total Present Worth	\$16,089,998
Total Annual O&M	\$139,154
Construction Time	Five months

## **EVALUATION OF RESPONSE ACTIONS**

To select a preferred alternative or response action for a site, EPA conducts a detailed analysis of the viable response actions. The detailed analysis consists of an assessment of the individual response actions against each of three overall evaluation criteria: 1) effectiveness, 2) implementability, and 3) cost, as well as a comparative analysis focusing upon the relative performance of each response action against those criteria. These criteria are similar to the screening criteria used to identify viable remedial alternatives in the CERCLA RI/FS process. For a NTCRA at a National Priorities List site, EPA is also required to determine if a selected response action would be inconsistent with or otherwise impede the selection and implementation of a final remedial action for the site. EPA has concluded that each of the response actions would be consistent with a final remedial action for OU2.

## **COMPARATIVE ANALYSIS OF RESPONSE ACTIONS**

### **Effectiveness**

Alternative 1 would not protect human health and the environment, a threshold criterion, so it gets eliminated from further consideration. Alternatives 2 and 3 would protect human health and the environment and would comply with action- and location-specific applicable or relevant and appropriate requirements (ARARs). Compliance with chemical-specific ARARs will be determined as part of the OU2 ROD. Alternative 2 would be effective in the long term; however, maintenance and monitoring are required to ensure long-term effectiveness and permanence of the remedy. Alternative 2 reduces the mobility of contaminated media through capping at the site but does not reduce the toxicity or volume other than berm removal.

Alternative 3 permanently removes soils and sediments that pose a potential ongoing source while EPA evaluates final actions for the sediments.



Alternatives 2 and 3 both may result in an increased short-term contaminant exposure to ecological receptors during the implementation. These potential exposures are expected to be localized and of short duration. Based on the analysis presented in the EE/CA, Alternative 3 offers a greater degree of long-term effectiveness and permanence.

### **Implementability**

Based on the evaluations presented in the EE/CA, both Alternative 2 and Alternative 3 are equally implementable. Both technologies presented are reliable; however, SRBs and caps require monitoring and maintenance. Both alternatives would include similar administrative and technical challenges.

### **Cost**

Costs for each alternative are presented in the EE/CA. The +50/-30 percent cost estimates provided for Alternatives 2 and 3 are within similar ranges. Therefore, cost considerations are not a primary factor in the selection of a preferred alternative.

Alternative	Capital Cost	Annual O&M Costs	Total Present Worth Cost
1	0	0	0
2	\$10,171,261	\$2,524,507	\$14,074,737
3	\$13,915,373	\$288,048	\$16,089,998

### **PREFERRED RESPONSE ACTION**

The EE/CA considered three removal action alternatives: Alternative 1 – No Action; Alternative 2 – Berm Removal and Sediment Containment (Capping), and Alternative 3 – Sediment Excavation, Backfilling and Berm Removal. Based on a favorable balance of the evaluation criteria, Alternative 3, Sediment Excavation, Backfilling and Berm Removal, is the response action recommended for implementation. This alternative is as implementable as Alternative 2 and within the same cost range. Based on the focused scope and area planned for the NTCRA, Alternative 3 is the most effective alternative for reducing the volume of

contaminated material at the site, mitigating potential human health and ecological risks, and controlling the potential secondary source of contaminated sediment to the downstream portions of the site. Therefore, Alternative 3 is the preferred alternative for the NTRCA at the site.

Remedial alternatives appropriate for the overall site remedy will be evaluated in the OU2 FS. The preferred alternative for the NTCRA is expected to be consistent with the range of remedial alternatives in the OU2 FS.

### **COMMUNITY ROLE IN THE RESPONSE SELECTION PROCESS**

EPA relies on public input to ensure that the concerns of the community are considered in selecting an effective response action for each Superfund site. To this end, the EE/CA has been made available to the public for a 30-day public comment period, as described above.

On March 6, 2012, EPA will hold a public meeting to present the findings and conclusions of the EE/CA. The Agency will describe the reasons for recommending the preferred response action and receive public comments.

Written comments regarding UOP EE/CA and the preferred alternative should be sent to the Remedial Project Manager for the UOP site by March 30, 2012.

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After consideration of the comments, an Action Memorandum will be prepared, formalizing the selection of the response action. Written comments will be responded to in a responsiveness summary that is attached to the Action Memorandum.

Questions or concerns regarding the site should be directed to Mr. Tomchuk at (212) 637-3956 or [tomchuk.doug@epa.gov](mailto:tomchuk.doug@epa.gov).










-  Proposed Remediation Areas
-  Functional Area
-  Operable Unit 1 - Uplands
-  Operable Unit 2 - Streamlands
-  UOP Site Boundary

Figure 1